

Date: Friday, 23/01/2009 8:45:42 AM  
 User: Julie Dawson

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : SHAFT SLEEVE  
 Job Number : 45172  
 Estimate Number : 11155  
 P.O. Number :  
 This Issue : 23/01/2009 S.O. No. :  
 Prsht Rev. : NC Part Number : D32337  
 Drawing Number : D3233 REV B  
 Project Number : N/A  
 First Issue : / / Type : MACHINED PARTS Drawing Revision : B  
 Material :  
 Previous Run : 43627 Due Date : 05/02/2009 Qty: 14 Um: Each  
 Written By :  
 Checked & Approved By : JUL 09.01.23  
 Comment : Est. A 05.03.14 New issue KJ/JLM  
 Est Rev:B Now on Doosan Lathe 08-04-01 JLM Verified by:EC

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M1020TR1375W125 ROUND TUBE 1.375 x .125w



Comment: Qty.: 0.1860 f(s)/Unit Total : 2.6034 f(s)

1020-1025 Round Tube

Material: AISI 1020-1025 Seamless Round Tubing Cold Drawn per MIL-T-5066 or ASTM A513-00 MT1020

SRA or AMS 5075 or AMS 5077

(M1020TR1.375W.125)

Identify for D3233-7

Batch: M103258

Jul 09/02/01

(14)

2.0 DOOSAN LATHE DOOSAN LATHE



Comment: Doosan Lathe

1- Turn as per Folio FA735 Rev: N/A & Dwg D3233 Rev: B

2-Deburr per dwg D3233

Jul 09/02/01

(14)

3.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

Jul 09/02/01

(14)

4.0 QC8 SECOND CHECK



Comment: SECOND CHECK

SA 09/02/02

(14)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Friday, 23/01/2009 8:45:42 AM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHAFT SLEEVE

Job Number: 45172

Part Number: D32337

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

PACKAGING 1

PACKAGING RESOURCE #1



SP

Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

a1212

(14x)

6.0

QC21

FINAL INSPECTION/W/O RELEASE



09/02/03 \*J

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



WLF 09-02-02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

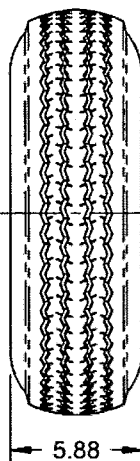
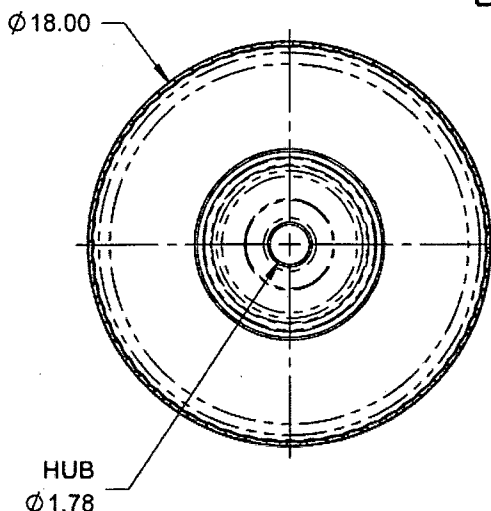
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



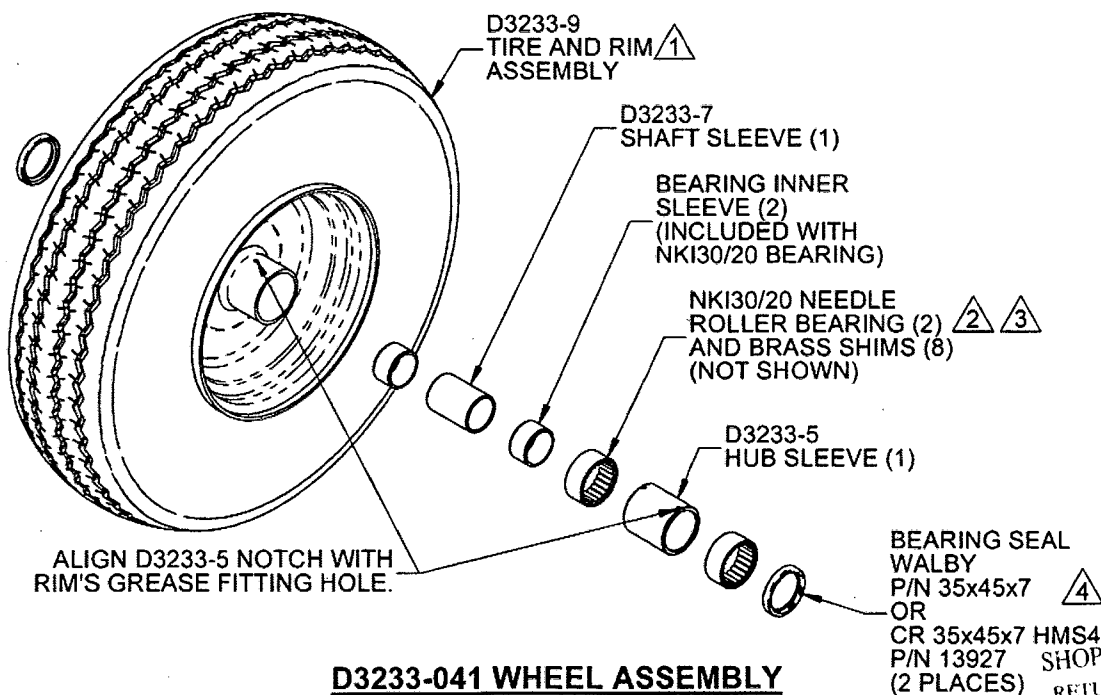
**DART**

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3233</b>	REV. B SHEET 1 OF 3
DATE <b>05.03.08</b>		TITLE <b>WHEEL ASSEMBLY</b>	SCALE 1:1
A	05.02.18	NEW ISSUE	
B	05.03.08	ADDED BEARING SEALS	

**RELEASED**  
*[Signature]*  
05/05/04

WHEEL SPECIFICATIONS		
SIZE	MAXIMUM LOAD	MAXIMUM INFLATION LOAD
TIRE: 19.0 x 5.8 RIM: 5.70 x 8.0	910 LBS (RANGE C)	90 PSI*

\* MANUFACTURER'S RECOMENDATIONS  
ARE 75 PSI FOR HIGH SPEED USE.

**D3233-041 WHEEL ASSEMBLY****NOTES:**





- 1) POSSIBLE SUPPLIER: McMASTER-CARR, P/N 8353T74
- 2) POSSIBLE SUPPLIER: GENERAL BEARING
- 3) PRESS FIT NEEDLE ROLLER BEARINGS INTO RIM HUB WITH  
(4) 0.5 X 0.75 X 0.004 BRASS SHIMS PER BEARING, (1) AT EACH QUADRANT.
- 4) POSSIBLE SUPPLIER: GENERAL BEARING
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

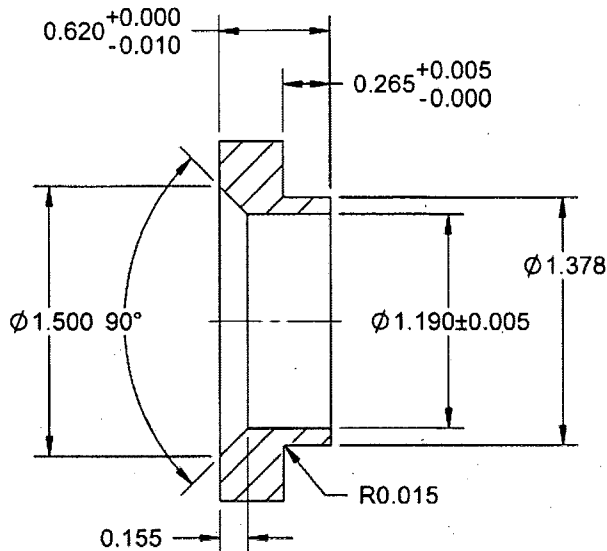
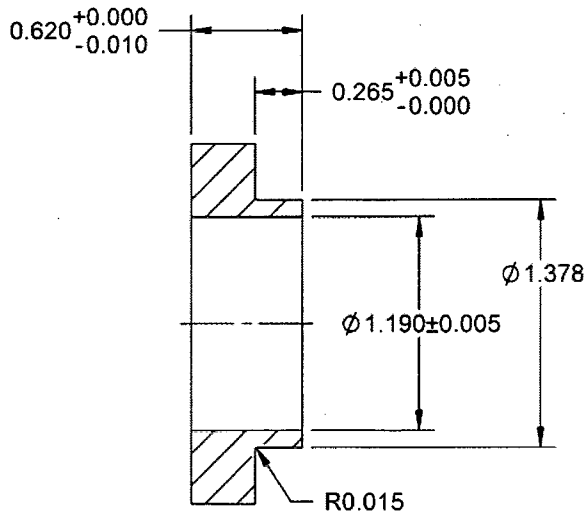
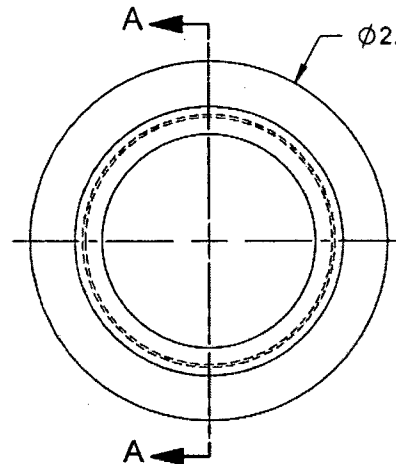
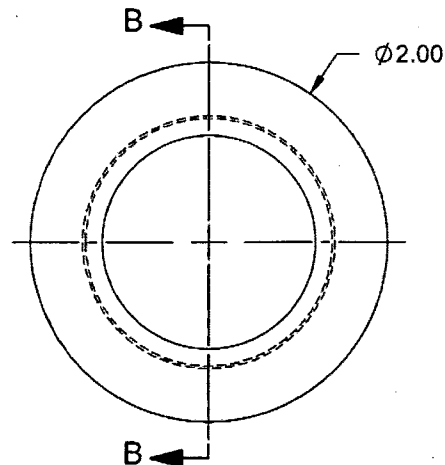
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 45172

**COPYRIGHT © 2005 BY DART AEROSPACE LTD.**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**DART**

DESIGN 	DRAWN BY 	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED 	APPROVED 	DRAWING NO. <b>D3233</b>	REV. B SHEET 2 OF 3
DATE <b>05.03.08</b>	TITLE <b>WHEEL ASSEMBLY</b>		SCALE 1:1

**SECTION A-A****D3233-1 INSIDE WASHER****SECTION B-B****D3233-3 OUTSIDE WASHER****NOTES:**

- 1) MATERIAL: AISI 1020-1025 ROUND TUBING PER MIL-T-5066 OR ASTM A513-00, MT1020 SRA OR AMS 5075 OR AMS 5077, COLD DRAWN, SEAMLESS (REF. DART SPEC. M1020TR)
- 2) FINISH: POWDER COAT FIRE RED (REF. 4.3.5.10) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT

WITHOUT NOTICE  
WORK ORDER

NO. 45172

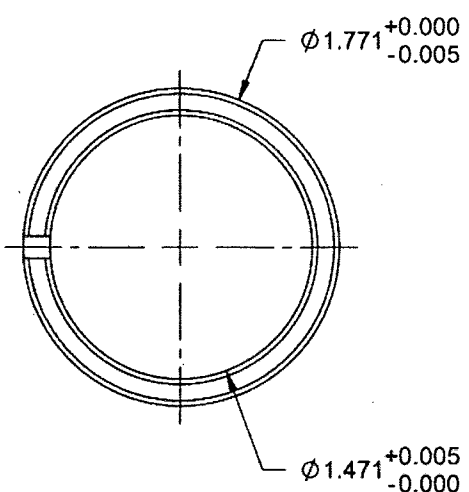
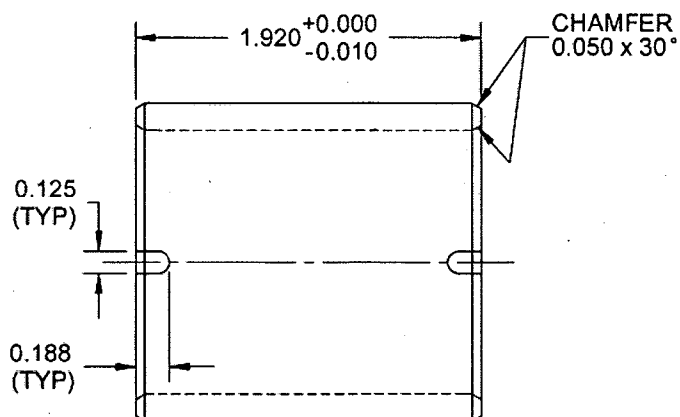
COPYRIGHT © 2005 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

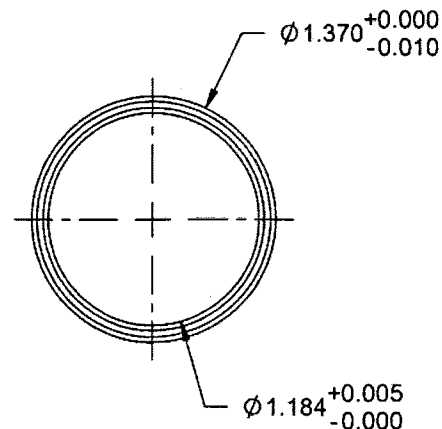
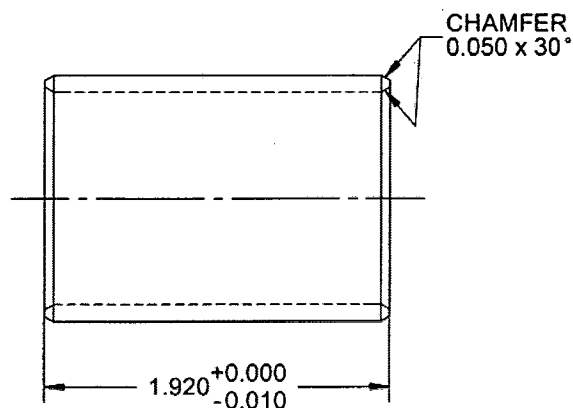


DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3233	REV. B SHEET 3 OF 3
DATE 05.03.08		TITLE WHEEL ASSEMBLY	SCALE 1:1

RELEASED  
*[Signature]*  
05/05/04



**D3233-5 HUB SLEEVE**



**D3233-7 SHAFT SLEEVE**

**NOTES:**

- 1) MATERIAL: AISI 1020-1025 ROUND TUBING PER MIL-T-5066 OR ASTM A513-00, MT1020 SRA OR AMS 5075 OR AMS 5077, COLD DRAWN, SEAMLESS (REF. DART SPEC. M1020TR)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.010 TO 0.030

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 45172

COPYRIGHT © 2005 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.